

What is claimed is:

1 1. A leakage detection apparatus for a multi-
2 channel inkjet cartridge comprising:

3 a plurality of electrodes, disposed in one of
4 channels of the inkjet cartridge respectively,
5 contacting a reagent in the corresponding
6 channel; and

7 a controller, coupled to the electrodes, to detect
8 leakage between channels.

1 2. The leakage detection apparatus as claimed in
2 claim 1, wherein the controller includes a voltage supply
3 device for providing voltage to one of the electrodes at
4 a time.

1 3. The leakage detection apparatus as claimed in
2 claim 2, wherein the controller includes a detection
3 circuit for coupling any two of the electrodes, and the
4 voltage supply device is coupled to the electrodes via
5 the detection circuit.

1 4. The leakage detection apparatus as claimed in
2 claim 1, wherein the controller includes a display to
3 display leakage detection results.

1 5. An inkjet dispensing apparatus comprising:

2 a cartridge including a plurality of channels,
3 wherein reagents are received in the channels;

4 a chip, disposed on the cartridge, including a
5 plurality of first through holes communicating
6 with one of the channels respectively;

7 a plurality of electrodes, disposed in one of the
8 channels of the cartridge respectively,
9 contacting the reagent in the corresponding
10 channel; and
11 a controller, coupled to the electrodes, to detect
12 leakage between channels.

1 6. The inkjet dispensing apparatus as claimed in
2 claim 5, wherein the chip is made of glass.

1 7. The inkjet dispensing apparatus as claimed in
2 claim 5, wherein the chip is covered by an electric-
3 isolating layer.

1 8. The inkjet dispensing apparatus as claimed in
2 claim 5, further comprising:

3 a barrier layer, disposed on the chip, including a
4 plurality of second through holes communicating
5 with the first through holes respectively; and
6 a nozzle plate, disposed on the barrier layer,
7 including a plurality of orifices communicating
8 with the second through holes respectively.

1 9. The inkjet dispensing apparatus as claimed in
2 claim 8, wherein the nozzle plate is made of polyimide.

1 10. The inkjet dispensing apparatus as claimed in
2 claim 5, wherein the controller includes a voltage supply
3 device for providing voltage to one of the electrodes at
4 a time.

1 11. The inkjet dispensing apparatus as claimed in
2 claim 10, wherein the controller includes a detection

3 circuit for coupling any two of the electrodes, and the
4 voltage supply device is coupled to the electrodes via
5 the detection circuit.

1 12. The inkjet dispensing apparatus as claimed in
2 claim 5, wherein the controller includes a display to
3 display leakage detection results.

1 13. A leakage detection method comprising:
2 providing an inkjet cartridge, a plurality of
3 electrodes, and a controller, wherein the
4 inkjet cartridge includes a chip and a
5 plurality of channels, reagents are received in
6 the channels, and the electrodes are coupled to
7 the controller;

8 inserting the electrodes to one of the channels of
9 the inkjet cartridge respectively so that each
10 of the electrodes contacts the reagent in the
11 corresponding channel; and

12 the controller detecting the leakage between the
13 channels via the electrodes.

1 14. The leakage detection method as claimed in
2 claim 13, wherein the chip is made of glass.

1 15. The leakage detection method as claimed in
2 claim 13, wherein the chip is covered by an electric-
3 isolating layer.

1 16. The leakage detection method as claimed in
2 claim 13, further comprising:

3 after inserting the electrodes into the channels,
4 the controller providing voltage to one of the
5 electrodes.

1 17. The leakage detection method as claimed in
2 claim 13, further comprising:

3 after the controller detects leakage, the controller
4 displays leakage detection results.